

# NEW RECORDS OF SPECIES OF LEPTOLAEELAPS (ACARINA, MESOSTIGMATA) FROM AUSTRALIA AND NEW ZEALAND

By H. WOMERSLEY\*

[Read 9 July 1959]

## SUMMARY

The New Zealand species of *Leptolaelaps*, *L. reticulatus* Evans, 1957, is now recorded from moss from S. Australia, and *L. macquariensis* (Wom., 1937) is recorded from New Zealand. The hitherto unknown male of *macquariensis* is described.

The genus *Leptolaelaps* Berlese, 1918, has recently been revised by Evans, 1957, and a key given for the six known species. These are *elegans* Berl. (the genotype) from the Transvaal, *lambda* Evans from Knysna, *capensis* Evans from Cape Province, and *lawrencei* Evans from Natal, *reticulatus* Evans from New Zealand and *macquariensis* (Womersley) from Macquarie Island.

All the known species are free living Mesostigmata occurring in moss and humus litter, except perhaps *macquariensis* which was recorded from "between tide marks, West Coast, Macquarie Island, 1913".

In the present paper two of the known species are recorded, namely, *Leptolaelaps reticulatus* Evans from South Australia, and *L. macquariensis* (Wom.) from New Zealand. Fresh drawings of these species are given, chiefly for accessibility by Australian students.

### GENUS LEPTOLAEELAPS Berlese, 1918

*Leptolaelaps* (subgen. of *Hypospis* Can.) Berlese, 1918, Redia 13, p. 122; emend. Evans, G. O., 1957, Ann. Natal Mus., 14 (1), p. 45. (Type *Leptolaelaps elegans* Berl., 1918.)

### *Leptolaelaps reticulatus* Evans

Fig. 1, A-E

*Leptolaelaps reticulatus* Evans, 1957, Ann. Mag. Nat. Hist., 14 (1), p. 45.

Specimens of this New Zealand species have recently been obtained from moss from Upper Sturt, S. Australia (3 females), 24/8/58 (G. F. Cross), and moss from Myponga, S. Australia (3 females), 4/11/58 (H.W.).

A comparison of the accompanying figures of this Australian material with the description and figures of Evans of the New Zealand specimens confirms the specific identification. The only slight and unimportant differences are the lighter reticulation of the ventral shields and the prolongation of the sternum scarcely reaching the posterior margin of coxae III. Also the lateral sclerites of the genital shield, which in Evans' description and figure project posteriorly beyond the lateral margins of the shield as far as the posterior pair of adjacent lateral cuticular setae, only reach as far as the first pair of these setae. The male is still unknown.

The figures given here were made before a separate of Evans' paper was received when it was thought to be a new species of *Leptolaelaps* Berl.

\* South Australian Museum.

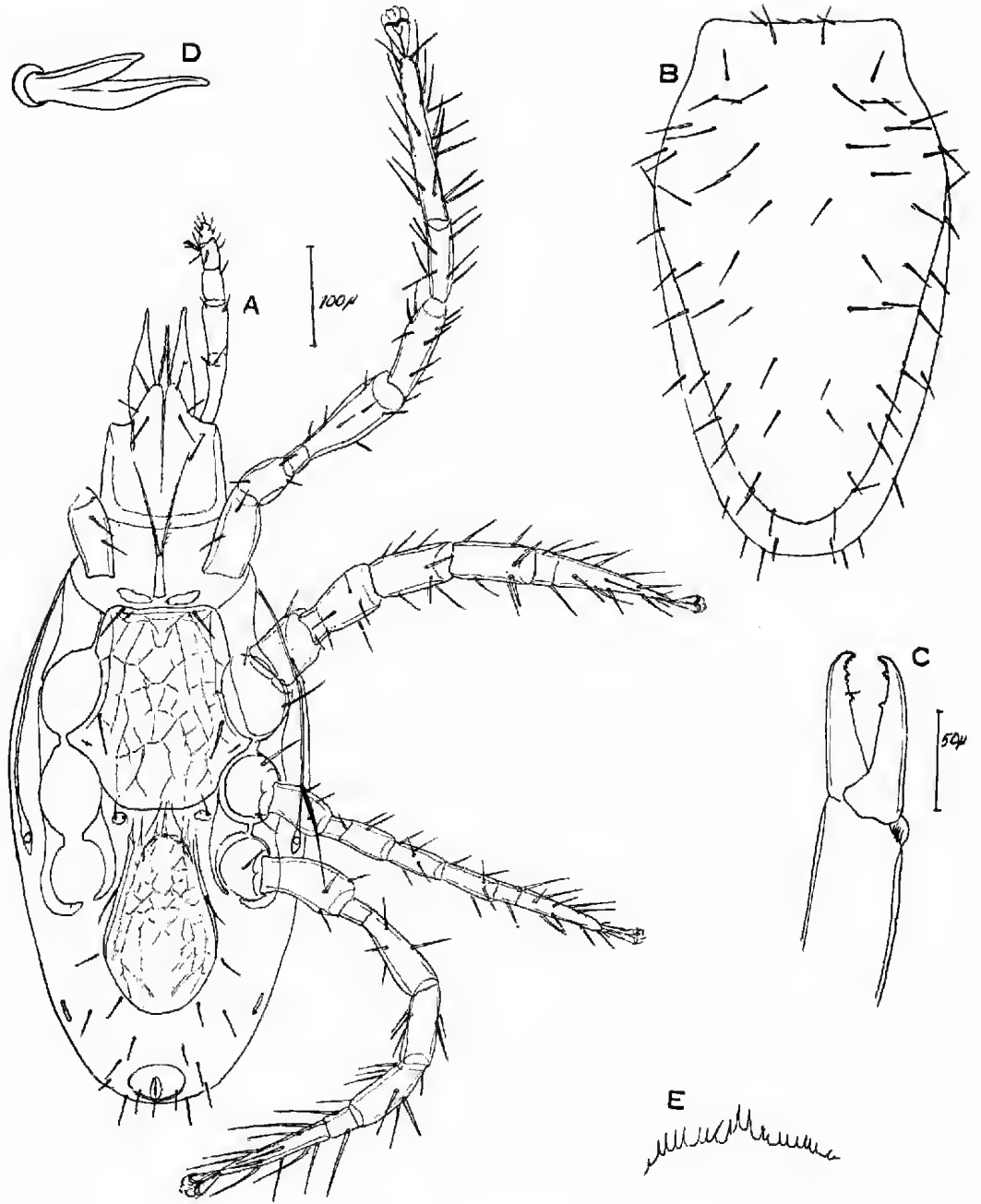


Fig. 1.—*Leptolaelaps reticulatus* Evans, female: A, ventral view; B, dorsum; C, chelicerae; D, seta of palpal tarsus; E, tectum.

*Leptolaelaps macquariensis* (Womersley, 1937)

Fig. 2, A-F

*Pachylaelaps macquariensis* Womersley, 1937, "Aurim" in "Sci. Repts. Australasian Antarctic Expedition, 1911-1914".

*Leptolaelaps macquariensis* Evans, 1957, Ann. Natal Mus., 14 (1), p. 46.

This species was originally described and figured from a single female collected "from between tide marks, on the West Coast of Macquarie Is.", by the Australasian Antarctic Expedition, 1911-1914, led by the late Sir Douglas Mawson.

It was placed by Womersley in the genus *Pachylaelaps* Berlese, 1888, but Evans has shown that although closely allied to *Pachylaelaps* it is more properly to be put into *Leptolaelaps* Berlese, 1918.

In the South Australian Museum are a female and a male specimen received some years ago from an old correspondent, Mr. E. D. Pritchard, and collected from moss from Manurewa, New Zealand, 14th July, 1934.

These specimens have now been studied and found to be con-specific with the specimen from Macquarie Island.

The male sex has not hitherto been known and is herewith described and figured, while the opportunity is taken to re-describe the female sex from the additional specimens and to give fresh figures.

*Re-description of female* (from the New Zealand specimen).

Dorsal shield covering entire body and underlapping narrowly on to the venter right around, with about 35 pairs of setae to  $50\mu$  long, and some pores.

Ventrally.—The sternal shield is strongly reticulate with a more strongly marked median strip, anteriorly it is  $178\mu$  wide and the median length is  $202\mu$ , it is furnished with the usual 3 pairs of setae and 2 pairs of pores, it extends posteriorly to between coxae III and IV; the pre-endopodal shields are transversely elongate with concave anterior and convex posterior margins; the metasternal shields are distinct, small and roughly oval with seta  $50\mu$  long and a pore; the genito-ventral shield is flask-shaped with broadly rounded posterior, and only slightly longer than broad,  $188\mu$  by  $164\mu$ , it almost touches the anal shield and is furnished with only one pair of setae (genital)  $50\mu$  long, the lateral sclerites are distinct and reach to between the first and second of the adjacent lateral setae; the anal shield is pyriform and as wide as long, the anus is situated anteriorly and the paranal setae are in line with its posterior edge; the metapodal shields are small and roughly elliptical and lie in a line between the two setae laterad of the genito-ventral shield; on the cuticle between the genito-ventral shield and the anal is one pair of setae and on each side laterad of the anal is another pair of setae; the podal shields are well developed and extend slightly beyond coxae IV, and are coalesced with the exopodal shields; the endopodal shields of coxae II and III are coalesced but separated by a fine suture from those of coxae IV; the stigma lies between coxae III and IV and the peritreme extends to the level of coxae I, the peritremal shield is narrow and extends posteriorly to middle of coxae IV and at the tip it is furnished with a small pore, anteriorly the shield is coalesced with the underlapping edge of the dorsal shield.

The base of the tritosternum is elongate and about 4 times as long as wide, it is furnished with the usual pair of ciliated laciniae. The gnathosoma is as figured with normal arrangement of setae; the palpi are 5-segmented and  $216\mu$  long with the specialised tarsal setae 2-tined; the cornicles are long and slender,  $94\mu$  long, and reach almost to the tip of palpal segment II, they are flanked by the equally long and elongate salivary stylets. The tectum is as figured with a short median mucro and about 9 denticles on each side. The

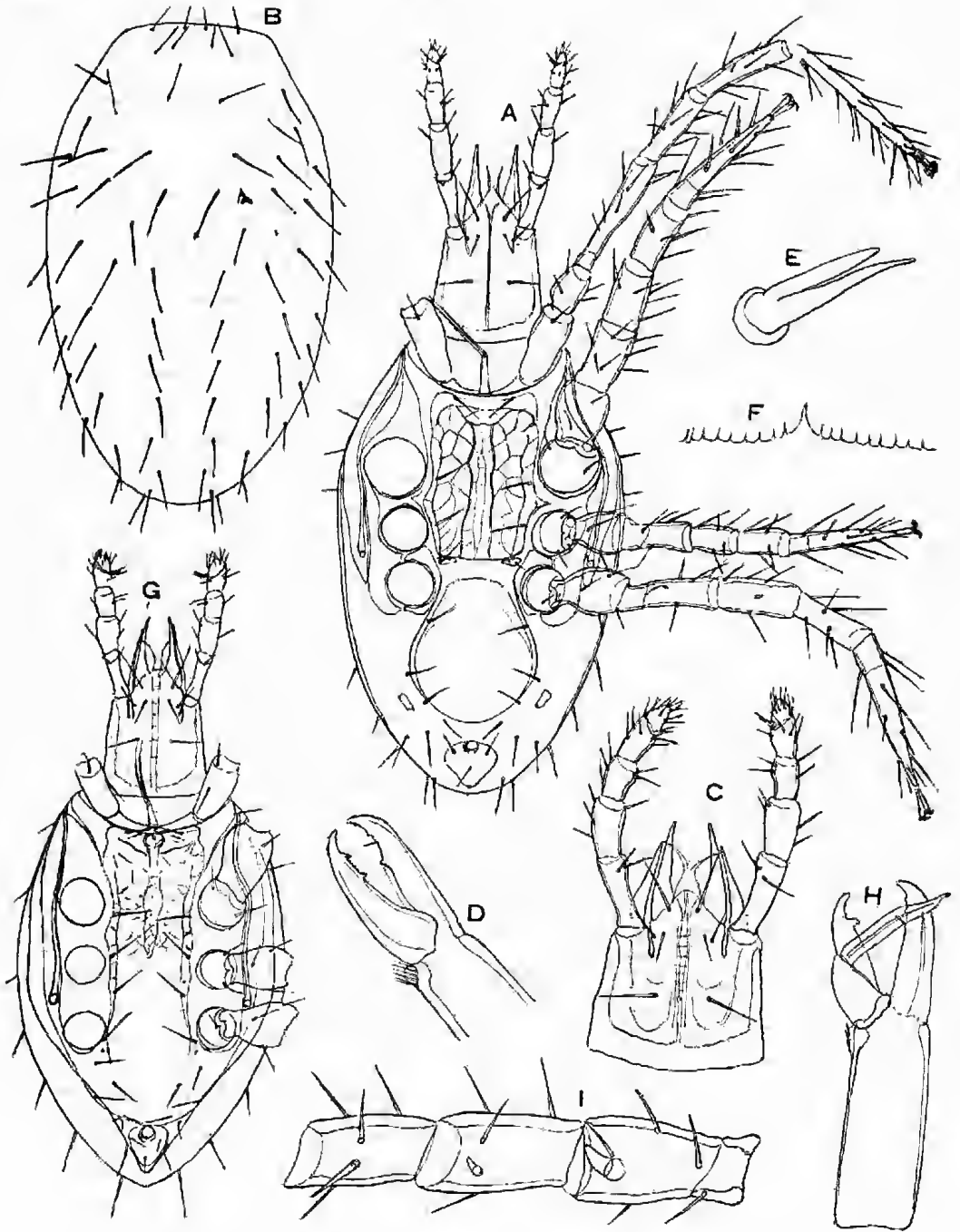


Fig. 2.—*Leptolaelaps macquariensis* (Wom.). A-F, female: A, ventral view; B, dorsum; C, gnathosoma; D, chelicerae; E, seta of palpal tarsus; F, tectum. G-I, male: G, venter; H, mandibles; I, femur, genu and tibia leg I

chelae are as figured, the movable digit with two moderately strong teeth between which is a number of minute teeth, the fixed digit has two moderate teeth and several smaller ones, with a short pilus dentalis.

The legs are generally slender, I and IV being longer than the idiosoma; I  $730\mu$  long, tarsus with slender geniculate caruncle and paired claws; II rather stouter  $580\mu$  long with normal caruncle; III  $487\mu$  long; IV  $696\mu$  long; III and IV more slender than II and the setae on tarsi to  $70\mu$  long.

*Dimensions of idiosoma*, length  $603\mu$ , width  $370\mu$ .

*Description of Male Allotype*.—General facies as in female. Dorsal shield covering body and underlapping venter more than in female, especially posterolaterally (see Fig. 2G).

Ventrally, the sternal, genital and ventral shields coalesced into a single shield which is broadly rounded posteriorly of coxae IV and almost reaches the anal shield, anteriorly it is reticulate much as in the female, it is furnished with 9 pairs of setae and the usual pores, it is  $376\mu$  long; the anal shield is  $56\mu$  long by  $56\mu$  wide and shaped as in the female.

Gnathosoma as in female; palpi  $211\mu$  long; cornicles  $85\mu$  long. The chelicerae as figured, movable digit  $66\mu$  long with only one strong tooth and furnished with a fairly thick and long spermatophoral process.

Legs as in female, except that femur and genu of II with strong processes as in Fig. 2 I, I  $696\mu$  long, II  $522\mu$ , III  $452\mu$ , IV  $626\mu$ .

*Dimensions of idiosoma*, length  $522\mu$ , width  $324\mu$ .

*Locality*.—One female and one male from moss, Manurewa, New Zealand, 14/7/34 (coll. E. D. Pritchard).

*Type*.—The male allotype and the female specimen are in the collection of the South Australian Museum. The female has been dissected, the gnathosoma and mandibles on one slide and the rest of the mite on another.

#### REFERENCES

- BERLASE, A., 1918. "Centuria Quarta di Acari Nuovi", Redia, 13, p. 122.  
 EVANS, G. O., 1957. Annals Natal Mus., 14 (1), pp. 45-57.